

Notice of Allowability

Application No.

09/866,538

Examiner

Chih-Min Kam

Applicant(s)

TSIEN ET AL.

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1653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/10/04.
2. ☒ The allowed claim(s) is/are 88,99,102-110,128, 134 and 138.
3. ☒ The drawings filed on 24 May 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>0304</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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An **Examiner's Amendment** to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James A Fox on March 24, 2004.

Examiner's Amendments to the Claims:

Claim 88 has been amended as follows:

88. (Currently amended) An isolated polynucleotide encoding at least a first monomer of a non-oligomerizing tandem fluorescent protein, wherein the non-oligomerizing tandem fluorescent protein comprises a first monomer of an *Aequorea* green fluorescent protein (GFP) or a fluorescent protein related to an *Aequorea* GFP operatively linked to at least a second monomer of an *Aequorea* GFP or a fluorescent protein related to an *Aequorea* GFP, and wherein said first monomer of the non-oligomerizing tandem fluorescent protein comprises a mutation of an amino acid residue corresponding to A206K, L221K, F223R, or a combination thereof of SEQ ID NO: 6 or SEQ ID NO: 10, wherein the numbering of the amino acid residues conforms to that in native *Aequorea* GFP (SEQ ID NO: 2), and wherein the propensity of the tandem fluorescent protein to form intermolecular oligomers is reduced or inhibited as compared to a monomer of an *Aequorea* GFP or a fluorescent protein related to an *Aequorea* GFP.

The following is an **Examiner's Statement of Reasons for Allowance**: The following reference appears to be the closest art to the claimed invention. Tsien *et al.* (U. S. Patent 6,140,132, filed June 1998) disclose the nucleotide and amino acid sequences of GFP variants from *Aequorea victoria*, e.g., EYFP-V68L/Q69K and ECFP mutant, however, the reference does not teach an isolated polynucleotide encoding at least a first monomer of a non-oligomerizing tandem fluorescent protein, wherein the first monomer of the non-oligomerizing tandem fluorescent protein comprises a mutation of an amino acid residue corresponding to A206K, L221K, F223R, or a combination thereof of SEQ ID NO: 6 or SEQ ID NO: 10, wherein the numbering of the amino acid residues conforms to that in native *Aequorea* GFP (SEQ ID NO: 2). Therefore, the claims are allowable over the art of record. Regarding the numbering of A206K, L221K, F223R in the SEQ ID NO:6 or 10, the amino acid residues are numbered with the first serine as amino acid number 2 even if a valine has been inserted after methionine number 1 and before the first serine so that the numbering of the amino acid residues conforms to that

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in native *Aequorea* GFP (SEQ ID NO: 2) as indicated in the paragraph [61] of the specification (page 24, lines 3-6).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

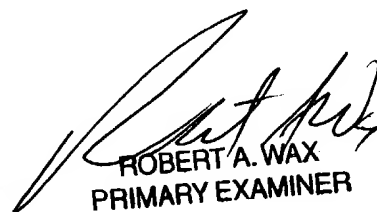
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (571) 272-0948. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (571) 272-0951. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 308-4227 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Chih-Min Kam, Ph. D. *CMK*
Patent Examiner

March 24, 2004


ROBERT A. WAX
PRIMARY EXAMINER